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(54) Title: IMPROVED SOLID CATALYST COMPONENT AND PROCESS FOR THE (CO) POLYMERIZATION OF ETHYLENE

(57) Abstract: Catalyst and solid component of catalyst for the (co)polymerization of ethylene, comprising titanium, magnesium, chlorine, a protic organo-oxygenated compound  $D_p$  and a neutral aprotic electron-donor compound D, in the following molar ranges:  $Mg/Ti = 1.0-50$ ;  $D/Ti = 1.0-15$ ;  $Cl/Ti = 6.0-100$ ;  $D_p/D = 0.05-3$ ; and a process for obtaining said component comprising the following steps in succession: (a) formation of a mixture and dissolution, in said electron-donor aprotic compound D, of a magnesium chloride and a titanium compound having formula (II):  $Ti^*(OR_3)_aX_{(v-a)}$  wherein each  $R_3$  independently represents a hydrocarbyl or acyl radical having from 1 to 15 carbon atoms; each X is selected from chlorine, bromine or iodine; "v" has the value of 3 or 4, and "a" is a number varying from 0 to "v", with a molar ratio between titanium and magnesium ranging from 1/1 to 50/1; (b) partial separation of the compound D from said mixture prepared in step (a) until a residue is obtained, solid at room temperature, wherein the D/Ti ratio ranges from 1.5 to 40, (c) formation of a suspension of said solid organo-oxygenated protic compound  $D_p$ , in such a quantity that the molar ratio  $D_p/D$  ranges from 0.1 to 1.2 and maintaining the mixture until equilibrium is reached, to form the desired solid component of catalyst.

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